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| 09/687,244 | 10/12/2000 | Shing Mark Lin | ADAPP169 | 1180 |

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| EXAMINER |
|---|
| TRUONG, LECHI |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2126 | |

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| Office Action Summary | Application No. 09/687,244 | Applicant(s) LIN ET AL. |
|---|---|---|
| | Examiner LeChi Truong | Art Unit 2126 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 October 2000*.

2a)☒ This action is **FINAL.**    2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2 and 4-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2 and 4-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4)☐ Interview Summary (PTO-413) Paper No(s). _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

## DETAILED ACTION

1.      Claims 1-12, 14-20 are presented for examination. This office action in response to the

amendment filed 12/14/2003. Applicant canceled claim 3 and amended claim 1.

2.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains.  Patentability shall not be negatived by the
> manner in which the invention was made.

*Claim Rejections - 35 USC § 103*

3.      Claims **1-2, 4-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarty

et al (US. Patent 5,954,796) in view Admitted Prior Art (APA).

4.      McCarty et al was cited in the last office action.

5.      **As to claim 1**, McCarty teaches the invention substantially as claimed including: a data

structure (an FC-specific LOG Function information structure 530, col 8, ln 27-67), a Fibre

Channel attribute value (port_name 535C, its unique Node_Name 535 B, Decice_Function 535

D, Device_type 535 E, col 8, ln 27-67), a functionality of a Fibre channel Controller (the LOG

Function, col 8, ln 27-67), user modification of the Fibre Channel attribute value (a configuration

change in the FC environment 220 and it would make any necessary changes in the FC

information structure 530, col 9, ln 1-15), a modification request( link element 525 comprise a

BUS_TARGET_LUN nexus , col 8, ln 40-67/ the SCSI command protocol include a LUN, col 3,

ln 15-37), modification ( the mapping between the link element 525 and the FC information

structure 530, col 8, ln 40-67), a code segment/ an Operating System Module(OMS), the OMS (

the higher level OS-compatible interface standard, col 8, ln 40-67, ln 1-5the OS envinroment, col

4,1 n7-20/col 8, ln 27-67), the OSM being providing the modification request ( these link

elements will presented to the upper level software structures that are present in the OS

environment for proper commands , col 10, ln 1-5), operation of the Fiber channel( the mapping,

col 8, ln 27-67), altering the functionality of the Fibre Channel(FC-specific information

structures associated with unique OS-compatible link elements are suitably updated, col 9, ln 1-

44).


6.      APA does not explicit teach the term " Fibre Channel controller". However, APA teaches

" Fibre Channel controller " ( the Fibre Channel Controller 206, page 6, ln 5-14).


7.      It would have been obvious to one of the ordinary skill in the art at time the invention

was made to combine the teaching of McCarty and APA because APA's " Fibre Channel

controller" would provide a high-speed data transfer interface that can be used to connect

systems and the storage in point -to - point.


8       **As to claim 2,** McCarty teaches the modification request (the upper – level commands,

col 8, ln 60-67).

9.    **As to claim 4**, McCarthy does not  teach a Fibre Channel Hardware Interface Module.

However, APA teaches a Fibre Channel Hardware Interface Module (CHIM 106, page 5, ln

1021).


10.   It would have been obvious to one of the ordinary skill in the art at time the invention

was made to combine the teaching of McCarty and APA because APA's " Fibre Channel

controller" would check the presence of adapter hardware, initialize the adapter, and access

connected devices.


11.   **As to claim 5,** APA teaches the modification request is received by the FCHIM (the

OSM 104 translates the command into an operating system independent CIM, col 4, ln 18-21/the

CHIM 106 ... receives CHIM commands and translates the CHIM commands into commands

for the SCSI controller, page 5, ln 8-18).


12.   **As to claim 6,** McCarthy teaches the function of the Channel controller (FC-specific

information structures associated with unique OS-compatible link elements are suitably updated,

col 9, ln 1-44/ col 8, ln 28-67), the Fibre Channel attribute value (port_name 535C, its unique

Node_Name 535 B, Decice_Function 535 D, Device_type 535 E, col 8, ln 27-67)


13.   **As to claim 7,** McCathy teaches the Fibre Channel attribute values (port_name 535C, its

unique Node_Name 535 B, Decice_Function 535 D, Device_type 535 E, col 8, ln 27-67/ col 7,

ln 45-67), a data type value (0_0_0/ 0_1_0, col 9, ln 45-67), an operating system depend code

module (the higher level OS-compatible interface standard, col 8, ln 40-67, ln 1-5the OS

envinroment, col 4,l n7-20/col 8, ln 27-67).

14.    McCarthy does not explicit teach the term " the operating system independent" .

However, APA teaches the operating system as the operating system independent  (CHIM 106,

page 5, ln 1-18).

15.    It would have been obvious to one of the ordinary skill in the art at time the invention

was made to combine the teaching of McCarty and APA because APA's " Fibre Channel

controller" would provide a large depth an breadth of products, which include SCIS disk drives,

to provide an operation system dependent which depend on the type from the operating system

of the executing application and to check the presence of adapter hardware, initialize the adapter,

and access connected devices.

16.    **As to claim 8,** McCarthy teaches the operating system dependent code module (the

higher-level OS-compatible interface standard, col 8, ln 40-67, ln 1-5the OS envinroment, col 4,l

n7-20/col 8, ln 27-67

17.    **As to claim 9,** McCarthy does not teach the OSM is further capable of providing

operating system independent commands (these link elements will be presented to be the upper

level software structures that are present in the OS environment for the proper commands, col

10, ln 1-5).

18.      **As to laim 10**, APA teaches CHIM 106(page 5, ln 1-18).

19.      **As to claim 11**, 12, they are apparatus claim of claims 5, 6; therefore, they are rejection

for the same reason as claims 5 and 6.

20.      **As to claim 13**, McCarthy teaches a Fibre Channel maximum port value (port name, col

7, ln 45-67/ col 8, ln 40-67).

21.      **As to claim 14**, McCarthy teaches a Fibre Channel Logical Unit Number (LUN)(a

BUS_TARGET_LUN, col 9, ln 45-67).

22.      **As to claim 15**, McCarthy teaches a Fibre Channel Arbitrated Loop value (an Arbitrated

Loop Physical Address, col 7, ln 45-67).

23.      **As to claim 16**, McCarty teaches a profile data structure (an FC-specific LOG Function

information structure 530, col 8, ln 27-67), a Fibre Channel attribute value (port_name 535C, its

unique Node_Name 535 B, Decice_Function 535 D, Device_type 535 E, col 8, ln 27-67), an an

operating system depend code module (the higher level OS-compatible interface standard, col 8,

ln 40-67, ln 1-5the OS envinroment, col 4,1 n7-20/col 8, ln 27-67), altering the functionality of

the Fibre Channel (FC-specific information structures associated with unique OS-compatible link elements are suitably updated, col 9, ln 1-44).

24.    APA does not explicit teach an operating system independent code, the term " Fibre Channel controller", However, APA teaches Fibre channel controller (the Fibre Channel Controller 206, page 6, ln 5-14), an operating system independendet code (CHIM 106, page 5, ln 1-18), the OSM 104 makes a series of calls to the MHIM 106 (page 5, ln 1-8) that allow the CHIM 106 communicate with the Fibre channel.

25.    It would have been obvious to one of the ordinary skill in the art at time the invention was made to combine the teaching of McCarty and APA because APA's " Fibre Channel controller" would provide a large depth an breadth of products, which include SCIS disk drives, to provide an operation system dependent which depend on the type from the operating system of the executing application and to check the presence of adapter hardware, initialize the adapter, and access connected devices.

26.    **As to claim 17,** APA teaches the OSM being capable of receiving operations system specific commands (the OSM 104 receives the operating system specific device access command, page 4, ln 17-21).

**27.**    **As to claim 18,** APA teaches the OSM is further capable of providing operation system

independent commands (the OSM 104 translates the command into an operating system

independent, page 4, ln 17-27).

**28.**    **As to claim 19, 20,** they are apparatus claim of claims 10, 11; therefore, it is rejected for

the same reasons as claims 10, 11 above.

## Response to the argument

29.    This action is in response to the amendment filed 12/4/2003 have been considered but

they are not persuasive

30.    In the remarks, Applicant argued (1) " Since the OS is not aware of the function details of

the FC devices, the OS cannot directly alter or access the FC information structure".

31.    Examiner respectfully traverses Applicant's remark:

As point (1), McCarthy teaches a link element 525 that is interpretable by a higher level

OS compatible/ OS environment (OSM) is mapped to the function information structure 530 (col

8, ln 40-65). The OS is not aware of the function details of the FC device but the higher level OS

compatible/ OS environment is presented for OSM, which provides the command to modify the

function details of the FC device.

### *32.*                                        *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LeChi  Truong whose telephone number is (703) 305 5312.  The

examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR of Public PAIP. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIP

system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

LeChi Truong

February 23, 2004

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